

GenCore version 5.1.4\_p5\_4578  
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OM protein - protein search, using sw model

Run on: March 13, 2003, 08:30:55 : Search time 36.5 Seconds  
(without alignments)  
91.268 Million cell updates/sec

Title: US-09-913-524-1

Perfect score: 143

Sequence: 1 PWSFSAURLQRPPEPAHANCHR 25

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 908470 seqs, 133250620 residues

Total number of hits satisfying chosen parameters: 908470

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database : A\_Geneseq\_101002.\*

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23: /SID52/qcgdata/geneseq/geneseq-emb1/AA2002.DAT.*

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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

#### SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	143	100.0	32	22 AAB92074	Inhibin peptide SE
2	143	100.0	33	22 AAB92075	Inhibin peptide SE
3	143	100.0	134	9 AAP80018	Sequence of the 18
4	143	100.0	134	22 AAB68139	Amino acid sequenc
5	143	100.0	134	22 AAM51942	Human TGFbeta prot
6	143	100.0	351	8 AAP70202	Sequence of human
7	143	100.0	366	7 AAP60519	Sequence of human
8	143	100.0	366	9 AAP83167	Sequence of the 18
9	143	100.0	366	21 AAY92015	Human inhibin A al
10	135	94.4	33	12 AAR12087	N-terminal of 18 k

11	135	94.4	360	7 AAP60517	Sequence of bovine
12	131	91.6	32	22 AAB92078	Inhibin peptide SE
13	131	91.6	33	22 AAB92079	Inhibin peptide SE
14	131	91.6	134	8 AAP71175	First protein chai
15	131	91.6	364	8 AAP70310	Sequence of porcine
16	131	91.6	364	8 AAP70199	Sequence of porcine
17	110	76.9	122	22 AAB73201	Inhibin balpha C-t
18	108	75.5	29	9 AAP81907	N-terminal of inhib
19	103	72.0	28	22 AAM51686	PAM related peptid
20	100	69.9	26	23 AAU93966	Bovine inhibin alp
21	87	60.8	26	10 AAP91262	Inhibin 18 kb chai
22	80	55.9	14	22 AAB68144	Peptide derived fr
23	80	55.9	14	22 AAB68178	Peptide derived fr
24	76	53.1	14	22 AAB68142	Peptide derived fr
25	76	53.1	14	22 AAB68175	Peptide derived fr
26	73	51.0	14	22 AAB68176	Peptide derived fr
27	73	51.0	27	21 AAY52423	Inhibin portion of
28	73	51.0	28	21 AAY52426	Peptide derived fr
29	72	50.3	14	22 AAB68145	Peptide derived fr
30	72	50.3	14	22 AAB68179	Peptide derived fr
31	71	49.7	14	22 AAB68174	Peptide derived fr
32	70	49.0	14	22 AAB68143	Peptide derived fr
33	70	49.0	14	22 AAB68177	Peptide derived fr
34	61	42.7	101	18 AAW10029	Chicken alpha-inhi
35	61	42.7	101	19 AAW61389	Peptide derived fr
36	59	41.3	14	22 AAB68141	Peptide derived fr
37	59	41.3	14	22 AAB68173	Peptide derived fr
38	59	41.3	161	22 AEG04119	Novel human diagno
39	59	41.3	161	22 AEG04122	Novel human diagno
40	56.5	39.5	123	22 AAU50148	Propionibacterium
41	55.5	38.8	368	21 AAB19523	G protein coupled
42	55.5	38.8	368	21 AAY71293	Human orphan G pro
43	55.5	38.8	368	21 AAR02827	Human G protein co
44	55.5	38.8	368	22 AAU10303	G-protein coupled
45	55.5	38.8	368	22 AAG64288	Human GTP-binding

#### ALIGNMENTS

RESULT 1  
AAB92074  
ID AAB92074 standard; Peptide; 32 AA.

XX AAB92074;

XX 22-JUN-2001 (first entry)

DT Inhibin peptide SEQ ID NO:1250.

DE Protection; endogenous therapeutic peptide; peptidase; conjugation;

KW blood component; modification; succinimidyl; maleimido group; amino;

KW hydroxyl; thiol; hormone; growth factor; neurotransmitter.

XX Homo sapiens.

OS Synthetic.

XX WO200069900 A2.

XX 23-NOV-2000.

XX 17-MAY-2000; 2000WO-US13576.

XX 17-MAY-1999; 99US-0134406.

PR 10-SEP-1999; 99US-0153406.

PR 15-OCT-1999; 99US-0159783.

XX (CONJ-) CONJUCHEM INC.

XX Bridon DP, Ezrin AM, Milner PG, Holmes DL, Thibaudau K.

XX WPI; 2001-112059/12.

PT Modifying and attaching therapeutic peptides to albumin prevents  
PT peptidase degradation, useful for increasing length of in vivo activity  
PT  
XX  
PS Disclosure; Page 603-604; 733pp; English.  
XX  
XX The present invention describes a modified therapeutic peptide (I)  
XX comprising a therapeutically active amino acid region (III) and a  
XX reactive group (II) (e.g. succinimidyl and maleimido groups) attached to  
XX a less therapeutically active amino acid region (IV), which covalently  
XX bonds with amino/hydroxyl/thiol groups on blood components to form a  
XX peptide stabilised therapeutic peptide composed of 3-50 amino acids.  
XX (I) are useful for modifying therapeutic peptides e.g. hormones, growth  
XX factors and neurotransmitters, to protect them from peptidase activity  
XX in vivo for the treatment of various disorders. Endogenous therapeutic  
XX peptides are not suitable as drug candidates as they require frequent  
XX administration due to rapid degradation by peptidases in the body.  
XX Modifying and attaching therapeutic peptides to albumin prevents or  
XX reduces the action of peptidases to increase length of activity (half  
XX life) and specificity as bonding to large molecules decreases  
XX intracellular uptake and interference with physiological processes.  
XX AAB90829 to AAB92441 represent peptides which can be used in the  
XX exemplification of the present invention.  
XX  
SQ Sequence 32 AA;  
Query Match 100.0%; Score 143; DB 22; Length 32;  
Best Local Similarity 100.0%; Pred. No. 3.2e-12;  
Matches 25; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 1 PWSPSALRLQLRPPEPAHAANCHR 25  
DB 8 PWSPSALRLQLRPPEPAHAANCHR 32  
RESULT 2  
AAB92075  
ID AAB92075 standard; Peptide: 33 AA.  
XX  
XX AAB92075;  
AC  
XX  
XX 22-JUN-2001 (first entry)  
XX Inhibin peptide SEQ ID NO:1251.  
XX  
XX Protection; endogenous therapeutic peptide; peptidase; conjugation;  
KW blood component; modification; succinimidyl; maleimido group; amino;  
KW hydroxyl; thiol; hormone; growth factor; neurotransmitter.  
XX  
XX Homo sapiens.  
OS Synthetic.  
OS  
XX W0200069900-A2.  
XX  
XX 23-NOV-2000.  
XX  
XX 17-MAY-2000; 2000WO-US13576.  
XX  
XX 17-MAY-1999; 99US-0134406.  
PR 10-SEP-1999; 99US-0153406.  
PR 15-OCT-1999; 99US-0159783.  
XX  
XX (CONJ-) CONJUCHEM INC.  
XX  
XX Bridon DP, Ezrin AM, Milner PG, Holmes DL, Thibaudeau K;  
XX  
XX WPI: 2001-112059/12.  
XX  
XX Modifying and attaching therapeutic peptides to albumin prevents  
XX peptidase degradation, useful for increasing length of in vivo activity  
XX  
XX Disclosure; Page 604; 733pp; English.  
PS

XX The present invention describes a modified therapeutic peptide (I)  
XX comprising a therapeutically active amino acid region (III) and a  
XX reactive group (II) (e.g. succinimidyl and maleimido groups) attached to  
XX a less therapeutically active amino acid region (IV), which covalently  
XX bonds with amino/hydroxyl/thiol groups on blood components to form a  
XX peptide stabilised therapeutic peptide composed of 3-50 amino acids.  
XX (I) are useful for modifying therapeutic peptides e.g. hormones, growth  
XX factors and neurotransmitters, to protect them from peptidase activity  
XX in vivo for the treatment of various disorders. Endogenous therapeutic  
XX peptides are not suitable as drug candidates as they require frequent  
XX administration due to rapid degradation by peptidases in the body.  
XX Modifying and attaching therapeutic peptides to albumin prevents or  
XX reduces the action of peptidases to increase length of activity (half  
XX life) and specificity as bonding to large molecules decreases  
XX intracellular uptake and interference with physiological processes.  
XX AAB90829 to AAB92441 represent peptides which can be used in the  
XX exemplification of the present invention.  
XX  
SQ Sequence 33 AA;  
Query Match 100.0%; Score 143; DB 22; Length 33;  
Best Local Similarity 100.0%; Pred. No. 3.3e-17;  
Matches 25; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 1 PWSPSALRLQLRPPEPAHAANCHR 25  
DB 9 PWSPSALRLQLRPPEPAHAANCHR 33  
RESULT 3  
AAP80018  
ID AAP80018 standard; Protein: 134 AA.  
XX  
XX AAP80018;  
AC  
XX  
XX 28-JAN-1993 (first entry)  
XX  
XX Sequence of the 18K alpha-chain of a protein exhibiting  
DE inhibin activity.  
DE  
XX Fertility control; inhibin; follicle stimulating hormone; inhibitor;  
KW gonadotropin.  
KW  
XX Homo sapiens.  
OS  
XX  
XX Key Location/Qualifiers  
FH Misc-difference 55  
FT /label= 1, R  
XX  
XX US4737578-A.  
XX  
XX 12-APR-1988.  
XX  
XX 07-APR-1986; 86US-0848924.  
XX  
XX 07-APR-1986; 86US-0848924.  
PR 10-FEB-1986; 86US-0828435.  
XX  
XX (SALK ) SALK INST FOR BIOL STUD.  
XX  
XX Evans RM, Rosenfeld MJ, Cerelli G, Mayo KE, Spiess J;  
PI Rivier JEF, Vale WW;  
XX  
XX WPI: 1988-119128/17.  
XX  
XX New proteins with inhibin activity - esp. useful for controlling  
PT fertility in males  
PT  
XX Claim 1; Column 7; 6pp; English.  
XX  
XX The inventors claim 2 proteins - A and B - each of which has a  
XX molecular weight of about 32k and is comprised of an alpha (18k) and  
XX

CC a beta (14K) chain of human inhibin. The alpha chain is AAF80018.  
 CC The beta chain is either AAP80019 or AAP80020. Proteins A and B are  
 CC useful for regulating fertility of mammals. Each 32K protein  
 CC exhibits inhibin activity in basal secretion of FHS but not  
 CC inhibiting basal secretion of luteinizing hormone (LH).  
 XX  
 XX

SQ Sequence 134 AA;

Query Match 100.0%; Score 143; DB 9; Length 134;  
 Best Local Similarity 100.0%; Pred. No. 1.4e-11;  
 Matches 25; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 PWSPSALRLQRPPEPAHANCHR 25  
 |||||  
 Db 8 PWSPSALRLQRPPEPAHANCHR 32

## RESULT 4

AAE68139

ID AAE68139 standard; Protein: 134 AA.

XX AAE68139;

DT 09-JUL-2001 (first entry)

XX Amino acid sequence of an alphaC fragment of human inhibin.

XX AlphaC portion; inhibin; alpha-subunit; glycoprotein;

KW follicle stimulating hormone; FSH; cancer.

XX Homo sapiens.

XX WC200129079-A1.

XX 26-APR-2001.

XX 18-OCT-2000; 2000WO-AU01258.

XX 18-OCT-1999; 99AU-0003485.

XX 03-AUG-2000; 2000AU-0009162.

XX (PRIN-) PRINCE HENRY'S INST MEDICAL RES.

XX (GROG/) GROOME N F.

XX Groome NP, Milne-Robertson DM, Stanton PG, Cahir NF;

XX WPI; 2001-308476/32.

XX N-PSDB; AAF84904.

XX Immuno-interactive fragments of alpha-C portion of mammalian inhibin  
 PI alpha-subunit used to, e.g. produce antigen-binding molecules for  
 PT diagnosing cancer.

XX Claim 5; Page 139; 159pp; English.

CC The present sequence represents an alphaC portion of a human inhibin  
 CC alpha-subunit. Inhibin is a dimeric glycoprotein which is able to  
 CC inhibit the secretion of follicle stimulating hormone (FSH) by the  
 CC pituitary. Immuno-interactive fragments of the alphaC portion of inhibin  
 CC alpha-subunit are used to raise antibodies. The antibodies are used to  
 CC diagnose cancer of tissues in the ovary, uterus, breast, pituitary,  
 CC testis, or prostate. The antibodies may be used in immunoassays such  
 CC as radio-immunoassays, affinity chromatography in isolating a natural  
 CC or recombinant mammalian inhibin, and for screening expression  
 CC libraries for variant polypeptides.

XX Sequence 134 AA;

Query Match 100.0%; Score 143; DB 22; Length 134;  
 Best Local Similarity 100.0%; Pred. No. 1.4e-11;  
 Matches 25; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 PWSPSALRLQRPPEPAHANCHR 25

Db 8 PWSPSALRLQRPPEPAHANCHR 32  
 |||||

## RESULT 5

AAAS1942

ID AAAS1942 standard; protein: 134 AA.

XX AAAS1942;

DT 01-FEB-2002 (first entry)

XX Human TGFbeta protein superfamily protein Inh-9.

XX Human: TGFbeta; transforming growth factor beta; mutant; antagonist;  
 KW agonist; ectopic bone formation; psoriasis; muscular atrophy; scar;  
 KW formation; fibrosis; cirrhosis; osteopathic; antipsoriatic;  
 KW antifibrotic; hepatotropic; vulnerary; Inh-9.

XX Homo sapiens.

XX DE10026713-A1.

XX 06-DEC-2001.

XX 30-MAY-2000; 2000DE-1026713.

XX 30-MAY-2000; 2000DE-1026713.

XX (SEBA/) SEBALD W.

XX Sebald W, Nickel J;

XX WPI; 2002-042559/06.

XX New mutain of transforming growth factor-beta superfamily protein,  
 PT useful for treating or preventing e.g. ectopic bone formation, competes  
 PT for receptor binding.

XX Disclosure; Fig 6; 54pp; German.

XX The present invention relates to muteins of a chain of a protein which,  
 CC when in the form of a homodimer, has antagonistic or partial agonistic  
 CC activity, and where the mutation results in the protein binding with low  
 CC affinity to its receptor. The protein is a member of the transforming  
 CC growth factor beta (TGFbeta) superfamily. The mutant sequences of the  
 CC invention can be used in the treatment of diseases associated with the  
 CC overexpression of TGFbeta family proteins, including ectopic bone  
 CC formation, psoriasis, muscular atrophy, scar formation, fibrosis and  
 CC cirrhosis. The present sequence is the human Inh-9 protein.

XX Sequence 134 AA;

Query Match 100.0%; Score 143; DB 23; Length 134;  
 Best Local Similarity 100.0%; Pred. No. 1.4e-11;  
 Matches 25; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 PWSPSALRLQRPPEPAHANCHR 25  
 |||||

Db 8 PWSPSALRLQRPPEPAHANCHR 32

## RESULT 6

AAAP70202

ID AAAP70202 standard; protein: 351 AA.

XX AAAP70202;

DT 09-APR-1991 (first entry)

XX Sequence of human inhibin alpha-chain precursor.

XX Fertility control; contraception; hormone; spermatogenesis.

```

XX OS Homo sapiens.
XX FH Key Location/Qualifiers
XX FT Active-site 312..313
XX FT Modified-site /note="putative dibasic processing site"
XX FT Modified-site 131..133
XX FT Modified-site /note="potential N-linked glycosylation sites"
XX FT Modified-site 253..255
XX FT Modified-site /note="as above"
XX FT Region 287..289
XX FT Region /note="as above"
XX FT Region 1..16
XX FT Region /note="signal sequence"
XX FT Region 17..117
XX FT Protein /note="pro region"
XX FT Cleavage-site 118..351
XX FT Cleavage-site 116..117
XX FT /note="proteolytic processing site"
XX PN 5P22491-A.
XX PD 20-MAY-1987.
XX PF 02-OCT-1986; 86EP-0307586.
XX PR 12-SEP-1986; 86US-0906729.
XX PR 03-OCT-1985; 85US-0783910.
XX PR 10-FEB-1986; 86US-0827710.
XX PA (GETH ) GENENTECH INC.
XX PI Mason AJ, Seeburg PH;
XX DR WPI: 1987-137512/20.
XX DR N-PSDB; AAN70314.
XX PT Recombinant human or porcine inhibin or activin - used for
XX PT modulating clinical condition or reproductive physiology of
XX PT animals.
XX PS Disclosure: Fig 6A; 48pp; English.
XX CC A compsn. comprising human or porcine inhibin which is completely
XX CC free of unidentified or porcine proteins is claimed. Also claimed
XX CC are non chromosomal DNA encoding inhibin-alpha or an inhibin-beta
XX CC chain. Sequencing of inhibin-encoding cDNA has led to the
XX CC identification of prodomain regions located N-terminal to the
XX CC mature inhibin chains that represent coordinately expressed
XX CC biologically active polypeptides. The prodomain regions or
XX CC prodomain immunogens are useful in monitoring preproinhibin
XX CC processing in transformant cell culture or in experiments directed
XX CC at modulating the clinical condit. or reproductive physiology of
XX CC animals.
XX SQ Sequence 351 AA;
Query Match 100.0%; Score 143; DB 8; Length 351;
Best Local Similarity 100.0%; Pred. No. 3,6e-11;
Matches 25; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 1 PWSPSALKLLQRPPEFAAHANCHR 25
DB 225 PWSPSALKLLQRPPEFAAHANCHR 249
RESULT 7
AAP60519
ID AAP60519 standard; Protein; 366 AA.
XX AC AAP60519;
XX DT 26-JUN-1991 (first entry)

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XX DE Sequence of human inhibin A subunit.
XX KW Hormone; inhibin agonist; antagonist; reproductive; gonad.
XX OS Homo sapiens.
XX FH Key Location/Qualifiers
XX FT Region 1..232
XX FT Region /note="claimed"
XX FT Region 52..232
XX FT Region /note="claimed"
XX FT Region 62..232
XX FT Peptide /note="claimed"
XX FT Protein 1..61
XX FT Protein 62..365
XX PN W08606076-A.
XX PD 23-OCT-1986.
XX PF 14-APR-1986; 86WO-AU00097.
XX PR 20-DEC-1985; 85AU-0003561.
XX PR 18-APR-1985; 85AU-0000194.
XX PR 06-SEP-1985; 85AU-0002320.
XX PR 29-OCT-1985; 85AU-0003157.
XX PR 19-DEC-1985; 85AU-0003960.
XX PR 01-JAN-1986; 86AU-0059049.
XX PR 02-APR-1987; 87AU-0071015.
XX PR 05-MAY-1986; 86CN-0103459.
XX PA (BIOT-) BIOTECHN AUSTR PTY.
XX PA (MOND ) MONASH UNIV.
XX PA (HENR-) PRICE HENRY'S HOSPITAL.
XX PA (SVIN-) ST VINCENTS'S INST MED RE.
XX PI Forage R, Stewart A, Robertson D, Dekretser DM;
XX DR WPI: 1986-291647/44.
XX DR N-PSDB; AAN60428.
XX PT New polynucleotide sequences and recombinant DNA - encoding
XX PT inhibin and synthetic peptides useful for affecting gonadal
XX PT function.
XX PS Disclosure: Fig 7; 71pp; English.
XX CC DNA encoding inhibin and inhibin or part, analogues, homologues or
XX CC precursors thereof when produced by recombinant techniques are also
XX CC claimed, as well as pharmaceutical compositions thereof. These may
XX CC be used as an inhibin agonist, antagonist or for eliciting an
XX CC antigenic response to affect gonadal function or reproductive
XX CC physiology.
XX SQ Sequence 366 AA;
Query Match 100.0%; Score 143; DB 7; Length 366;
Best Local Similarity 100.0%; Pred. No. 3,8e-11;
Matches 25; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 1 PWSPSALKLLQRPPEFAAHANCHR 25
DB 240 PWSPSALKLLQRPPEFAAHANCHR 264
RESULT 8
AAP83167
ID AAP83167 standard; Protein; 366 AA.
XX AC AAP83167;
XX DT 28-JAN-1993 (first entry)

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XX DE Sequence of the 18K alpha-chain of a protein exhibiting
DE DE inhibin activity and its N-terminal sequence.
XX KW Fertility control; inhibin; follicle stimulating hormone; inhibitor;
XX KW gonadotropin.
XX OS Homo sapiens.
XX FH Key Location/Qualifiers
XX FT 1..232
XX FT /label= N-terminal
XX FT 233..366
XX FT /label= alpha chain
XX FT /note= "claimed"
XX PN U34737578-A..
XX XX 12-APR-1988..
XX XX 07-APR-1986; 86US-0848924..
XX XX 07-APR-1986; 86US-0848924..
XX PR 10-FEB-1986; 86US-0828435..
XX XX (SALK ) SALK INST FOR BIOL STUD..
XX PI Evans RM, Rosenfeld MG, Cerelli G, Mayo KE, Spiess J;
XX PI Rivier JEF, Vale WW;
XX XX WPI: 1988-119128/17..
XX DR N-PSDB; AAN00040..
XX PT New proteins with inhibin activity - esp. useful for controlling
XX PT fertility in males
XX PS Disclosure: Table 1, page 6-7; 6pp; English.
XX CC The inventors claim 2 proteins - A and B - each of which has a
XX CC molecular weight of about 32K and is comprised of an alpha (18K) and
XX CC a beta (14K) chain of human inhibin. The alpha chain is AAP80018.
XX CC The beta chain is either AAP80019 or AAP80020. Proteins A and B are
XX CC useful for regulating fertility of mammals. Each 32K protein
XX CC exhibits inhibin activity in basal secretion of FHS but not
XX CC inhibiting basal secretion of luteinizing hormone (LH).
XX SQ Sequence 366 AA;
XX Query Match 100.0%; Score 143; DB 9; Length 366;
XX Best Local Similarity 100.0%; Pred. No. 3.8e-11;
XX Matches 25; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 1 PWSPSALRLRLQRPPEPAAHANCHR 25
DB 240 PWSPSALRLRLQRPPEPAAHANCHR 264
RESULT 9
AAY92015
UU AAY92015 standard; Protein: 366 AA.
XX AC AAY92015;
XX XX 19-JUL-2000 (first entry)
XX XX Human inhibin A alpha subunit.
XX XX human inhibin A alpha subunit; CKGF; mutant; cystine knot growth factor;
XX KW hairpin loop; infertility.
XX OS Homo sapiens.
XX FH Key Location/Qualifiers

```

```

FT Misc-difference 1..265
FT /note= "optionally mutated to increase electrostatic
FT interaction between beta hairpin structure and
FT a receptor"
FT Domain 266..286
FT /label= beta_hairpin_loop_1
FT /note= "mutant optionally comprises one or more
FT substitutions in these residues"
FT Misc-difference 287..331
FT /note= "optionally mutated to increase electrostatic
FT interaction between beta hairpin structure and
FT a receptor"
FT Domain 332..359
FT /label= beta_hairpin_loop_3
FT /note= "mutant optionally comprises one or more
FT substitutions in these residues"
FT Misc-difference 360..366
FT /note= "optionally mutated to increase electrostatic
FT interaction between beta hairpin structure and
FT a receptor"
XX WO200017360-A1..
XX PN 30-MAR-2000..
XX PD 19-MAR-1999; 99WO-US05908..
XX PF 22-SEP-1998; 98WO-US19772..
XX PR (UYMA-) UNIV MARYLAND BALTIMORE..
XX PA Weintraub BD, Szkudlinski MW;
XX PI WPI: 2000-283585/24..
XX DR New mutant cystine knot growth factor proteins comprising one or more
XX PT mutant subunits, useful for treating or preventing diseases e.g.
XX PT hypothyroidism and thyroid cancer
XX PS Claim 268; Page 303; 320pp; English.
XX CC This is the wild type human inhibin A alpha subunit.
XX CC Mutants comprise at least one electrostatic charge altering mutation in a
XX CC beta hairpin loop, resulting in increased bioactivity.
XX CC Mutant cystine knot growth factor (CKGF) proteins comprising one or more
XX CC mutant subunits and having novel properties or improved pharmacological
XX CC properties, compared to wild type CKGFs, are claimed. The CKGF
XX CC superfamily comprises at least four families of growth factors: the
XX CC glycoprotein hormones, the platelet-derived growth factor (PDGF) family,
XX CC the neurotrophins and the transforming growth factor-beta family; the
XX CC families are known to be structurally similar (especially comprising the
XX CC cystine knot topology) and it was shown that mutations at certain
XX CC positions in the CKGF hairpin loops of family members and other members
XX CC of the CKGF superfamily could significantly alter the biological
XX CC activities of the CKGF.
XX CC Mutant transforming growth factor family proteins or analogues are useful
XX CC for treatment of ovulatory dysfunction, luteal phase defect, unexplained
XX CC infertility, time-limited conception and in assisted reproduction.
XX SQ Sequence 366 AA;
XX Query Match 100.0%; Score 143; DB 21; Length 366;
XX Best Local Similarity 100.0%; Pred. No. 3.8e-11;
XX Matches 25; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 1 PWSPSALRLRLQRPPEPAAHANCHR 25
DB 240 PWSPSALRLRLQRPPEPAAHANCHR 264
RESULT 10
AAR12087
ID AAR12087 standard; peptide: 33 AA.

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XX AAR12087;
XX 01-AUG-1991 (first entry)
XX N-terminal of 18 kD subunit of ovine inhibin.
XX Follicle stimulating hormone; FSH; luteinising hormone; LH;
XX Fertility; gonadotropin.
XX Ovis aries.
XX US5015729-A.
XX 14-MAY-1991.
XX 23-JUN-1988; 88US-0210683.
XX 23-JUN-1988; 88US-0210683.
XX 24-JUN-1986; 86US-0878063.
XX (SALK ) SALK INST FOR BIOL STUD.
XX Spiess J, Rivier JEF, Bardin CW, Vale WW:
XX WPI; 1991-163615/22.
XX Pure ovine inhibin protein - which inhibits secretion of follicle
XX stimulating hormone while not inhibiting secretion of luteinising
XX hormone.
XX Claim 1; Page 11; 11pp; English.
XX The sequence is the N-terminal of the 18 kD subunit of the ovine
XX inhibin dimer. The protein specifically inhibits basal secretion of
XX follicle stimulating hormone (FSH) but not that of luteinising
XX hormone (LH). It can be admin. to mammals for control of fertility,
XX gonadotropin secretion or sex hormone prodn. Admin decreases
XX fertility in females and decreases spermatogenesis in males. The
XX protein can also be used to diagnose infertility. Antibodies raised
XX against the protein acn neutralise the activity and could be used in
XX immunisation to block endogenous secretion of inhibin, elevating
XX endogenous gonadotropin secretion. The protein was purified from
XX ram rete testis fluid by a combination of gel filtration and
XX reverse phase HPLC. See also AAX12088.
XX Sequence 33 AA;
XX Query Match 94.4%; Score 135; DH 12; Length 33;
XX Best Local Similarity 92.0%; Pred. No. 3,9e-11;
XX Matches 23; Conservative 2; Mismatches 0; Indels 0; Gaps 0;

QY 1 PWSPALRLQLRPPEPAHANCHIR 25
Db 8 PWSPALRLQLRPPEPAHANCHIR 32

RESULT 11
AAB60517
ID AAB60517 standard; Protein; 360 AA.
XX
XX AAB60517;
XX
XX 26-JUN-1991 (first entry)
XX Sequence of bovine inhibin A subunit.
XX Hormone; inhibin agonist; antagonist; reproductive; gonad.
XX Bos taurus.
XX Key Location/Qualifiers
XX Region 1..226

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XX Region /note= "claimed"
XX 51..226
XX Region /note= "claimed"
XX 61..226
XX Peptide /note= "claimed"
XX 1..60
XX Protein 61..360
XX WO8606076-A.
XX 23-OCT-1986.
XX 14-APR-1986; 86WO-AU00097.
XX 20-DEC-1985; 85AU-0003961.
XX 18-APR-1985; 85AU-000194.
XX 06-SEP-1985; 85AU-0002320.
XX 29-OCT-1985; 85AU-0003157.
XX 19-DEC-1985; 85AU-0003960.
XX 01-JAN-1986; 86AU-0059039.
XX 02-APR-1987; 87AU-0071015.
XX 05-MAY-1986; 86CN-0103459.
XX (BIOT-) BIOTECHN AUSIR PTY.
XX (MONU ) MONASH UNIV.
XX (HENR-) PRICE HENRY'S HOSPITAL.
XX (SVIN-) ST VINCENTS'S INST MED RE.
XX Forage R, Stewart A, Robertson D, Dekretser DM;
XX WPI; 1986-291647/44.
XX N-PSDB; AAN60426.
XX New polynucleotide sequences and recombinant DNA - encoding
XX inhibin and synthetic peptides useful for affecting gonadal
XX function
XX Disclosure; Fig 5; 7lpp; English.
XX DNA encoding inhibin and inhibin or part, analogues, homologues or
XX precursors thereof when produced by recombinant techniques are also
XX claimed, as well as pharmaceutical compositions thereof. These may
XX be used as an inhibin agonist, antagonist or for eliciting an
XX antigenic response to affect gonadal function or reproductive
XX physiology.
XX Sequence 360 AA;
XX Query Match 94.4%; Score 135; DH 7; Length 360;
XX Best Local Similarity 92.0%; Pred. No. 4.4e-10;
XX Matches 23; Conservative 2; Mismatches 0; Indels 0; Gaps 0;

QY 1 PWSPALRLQLRPPEPAHANCHIR 25
Db 234 PWSPALRLQLRPPEPAHANCHIR 258

RESULT 12
AAB92078
ID AAB92078 standard; Peptide; 32 AA.
XX
XX AAB92078;
XX
XX 22-JUN-2001 (first entry)
XX Inhibin peptide SEQ ID NO:1254.
XX Protection; endogenous therapeutic peptide; peptidase; conjugation;
XX blood component; modification; succinimidy1; maleimido group; amino;
XX hydroxyl; thiol; hormone; growth factor; neurotransmitter.
XX Homo sapiens.
XX Synthetic.

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XX WPI; 1987-037245/05.
XX
XX New protein which specifically inhibits basal secretion of FSH
XX - isolated from porcine follicular fluid, useful as male
XX contraceptive.
XX
XX Claim 8; Page 22; 35pp; English.
XX
XX The protein sequence encodes the 18 kDa first chain of the 32 kDa
XX FSH secretion-inhibitor. This sequence is linked by disulfide bonds
XX to a sequence (AAP71176 or AAP71177) encoding a second polypeptide of
XX the FSH secretion-inhibitor. The complete protein is used for
XX regulating (decreasing) fertility in mammals, is used as a male
XX contraceptive and in tests for infertility diagnosis.
XX
XX Sequence 134 AA:
XX
XX Query Match 91.6%; Score 131; DB 8; Length 134;
XX Best Local Similarity 88.0%; Pred. No. 5.5e-10;
XX Matches 22; Conservative 2; Mismatches 1; Indels 0; Gaps 0;
XX
XX QY 1 FWSPSALRLQRPPEPAHANCHR 25
XX      |||||:|||||:||||| ||:||||
XX Db 8 FWSPAALRLQLQRPPEPAVHADCHR 32
XX
XX RESULT 15
XX AAP70310
XX ID AAP70310 standard; protein; 364 AA.
XX AC AAP70310;
XX
XX DT 09-APR-1991 (first entry)
XX
XX DE Sequence of porcine inhibin alpha-chain precursor.
XX
XX KW Fertility control; contraception; hormone; spermatogenesis.
XX
XX OS Sus scrofa domestica.
XX
XX PH Key Location/Qualifiers
XX FT Active-site 55..56
XX FT /note="putative dibasic processing sites"
XX FT Active-site 59..60
XX FT /note="as above"
XX FT Active-site 68..69
XX FT /note="as above"
XX FT Modified-site 144..146
XX FT /note="potential N-linked glycosylation sites"
XX FT Modified-site 266..268
XX FT /note="as above"
XX FT Region 1..230
XX FT /note="used to design a long synthetic DNA probe"
XX FT Protein 231..364
XX FT Cleavage-site 229..230
XX FT /note="proteolytic processing site"
XX FT Region 232..252
XX FT /note=" ( basis of probe AAP71184 )"
XX
XX EP222491-A.
XX
XX PD 20-MAY-1987.
XX
XX PF 02-OCT-1986; 86EP-0307586.
XX
XX PR 12-SEP-1986; 86US-0906729.
XX PR 03-OCT-1985; 85US-0783910.
XX PR 10-FEB-1986; 86US-0827710.
XX
XX (GETH ) GENENTECH INC.
XX
XX Mason AJ, Seeburg PH;

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XX WPI; 1987-137512/20.
XX DR N-PSDB; AAN70310.
XX
XX Recombinant human or porcine inhibin or activin - used for
XX modulating clinical condition or reproductive physiology of
XX animals.
XX
XX Disclosure; Fig 1B; 48pp; English.
XX
XX A compsn. comprising human or porcine inhibin which is completely
XX free of unidentified or porcine proteins is claimed. Also claimed
XX are non chromosomal DNA encoding inhibin-alpha or an inhibin-beta
XX chain. Sequencing of inhibin-encoding cDNA has led to the
XX identification of prodomain regions located N-terminal to the
XX mature inhibin chains that represent coordinately expressed
XX biologically active polypeptides. The prodomain regions or
XX prodomain immunogens are useful in monitoring preproinhibin
XX processing in transformant cell culture or in experiments directed
XX at modulating the clinical condn. or reproductive physiology of
XX animals.
XX
XX Sequence 364 AA:
XX
XX Query Match 91.6%; Score 131; DB 8; Length 364;
XX Best Local Similarity 88.0%; Pred. No. 1.5e-09;
XX Matches 22; Conservative 2; Mismatches 1; Indels 0; Gaps 0;
XX
XX QY 1 FWSPSALRLQRPPEPAHANCHR 25
XX      |||||:|||||:||||| ||:||||
XX Db 238 FWSPAALRLQLQRPPEPAVHADCHR 262

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Search completed: March 13, 2003, 12:34:56  
Job time : 39.5 secs